

What is Claimed is:

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A1  
1. A nitride based semiconductor laser device comprising:

5 a transparent substrate having conductive properties;

a nitride based semiconductor layer formed on one surface of said transparent substrate and constituting a cavity;

10 a first ohmic electrode of a first conduction type formed on the other surface of said transparent substrate; and

a second ohmic electrode of a second conduction type formed on said nitride based semiconductor layer,

15 at least one of said first and second ohmic electrodes being formed in such a shape or arrangement that the forward and backward directions along the cavity length of said nitride based semiconductor layer can be distinguished.

2. The nitride based semiconductor laser device  
20 according to claim 1, wherein

said first ohmic electrode and said second ohmic electrode have different shapes.

3. The nitride based semiconductor laser device  
25 according to claim 1, wherein

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said first ohmic electrode and said second ohmic electrode have the same shape.

4. The nitride based semiconductor laser device  
5 according to claim 1, wherein

said second ohmic electrode is arranged on a region different from a region above a region where said first ohmic electrode is formed in said nitride based semiconductor layer.

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5. The nitride based semiconductor laser device according to claim 1, wherein

said transparent substrate is composed of gallium nitride or silicon carbide.

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6. The nitride based semiconductor laser device according to claim 1, wherein

said nitride based semiconductor layer contains at least one of gallium, aluminum, indium, boron, and thallium.

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7. The nitride based semiconductor laser device according to claim 1, wherein

at least one of said first and second ohmic electrodes is asymmetric with respect to a line passing through a center  
25 point of said cavity length and vertical to the cavity length

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5        said nitride based semiconductor layer has a striped  
current injection region, and

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13. The method according to claim 12, further comprising

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14. The method according to claim 12, wherein the step of forming said first and second ohmic electrodes comprises the step of forming the first ohmic electrode and the second ohmic electrode in different shapes.

15. The method according to claim 12, wherein the step of forming said first and second ohmic electrodes comprises the step of forming the first ohmic electrode and the second ohmic electrode in the same shape.

16. The method according to claim 12, wherein the step of forming said first and second ohmic electrodes comprises the step of arranging said second ohmic electrode on a region different from a region above a region where said first ohmic electrode is formed in said nitride based semiconductor layer.

17. The method according to claim 12, wherein  
said transparent substrate is composed of gallium  
nitride or silicon carbide.

18. The method according to claim 12, wherein  
said nitride based semiconductor layer contains at  
least one of gallium, aluminum, indium, boron, and thallium.

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21. The method according to claim 13, wherein said dielectric films respectively formed at the front facet and the rear facet of said cavity have different reflectances.